

Notice of Allowability

Application No.

10/808,101

Examiner

Erick Glass

Applicant(s)

CHAPMAN ET AL.

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/11/06.
2. ☒ The allowed claim(s) is/are 1-10,13-18,20,22-34,36-45,47 and 48.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). .
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Allowable Subject Matter

Claims 1-10, 13-18, 20, 22-34, 36-45, and 47-48, are allowable. The following is an examiner's statement of reasons for allowance: With respect to claim 1, the Prior Art does not teach commutating the motor under open-loop control based on energizing its windings according to a stored commutation table whose table entries define sequential commutation states for the windings; and controlling motor speed by setting a selection rate for sequentially selecting the table entries; wherein the motor comprises an image forming apparatus drive motor, and wherein con

With respect to claim 16, the Prior Art does not teach driving an image forming subassembly of the image forming apparatus with a brushless dc motor; and controlling the motor based on open-loop commutation comprising commutating the motor by energizing its windings according to a stored commutation table whose table entries define sequential commutation states for the windings, and controlling motor speed by setting a selection rate for sequentially selecting the table entries; further comprising starting the motor in the first mode and transitioning to the second mode and selectively operating in either the first mode or the second mode as a function of a desired process speed for the image forming apparatus.

With respect to claim 32, the Prior Art does not teach a logic circuit configured to obtain sequential commutation states for the motor from a stored commutation table whose table entries define sequential commutation states for the windings of the motor; and an output circuit configured to output commutation signals for commutating motor

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according to the sequential commutation states; said logic circuit further configured to control motor speed by setting a selection rate for sequentially selecting table entries; wherein the motor comprises an image forming apparatus drive motor, and wherein the motor control circuit is configured to control the motor speed as a function of printing process operations.

With respect to claim 43, the Prior Art does not teach a printer subassembly used in an image forming process of the image forming apparatus; a brushless dc motor configured to drive the printer subassembly; and a motor control circuit configured to commutate the motor under open-loop control based on energizing its windings according to a stored commutation table whose table entries define sequential commutation states for the windings; said motor control circuit configured to control motor speed by setting a selection rate for sequentially selecting table entries; wherein the motor control circuit is associated with a memory that is configured to store the commutation table.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Glass whose telephone number is 571-272-8395. The examiner can normally be reached on 8-5 M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on 571-272-1988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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EXAMINER
12/26/2006